PIONEER®
The future of sound and vision.

Service Manual

UNIVERSAL CD ADAPTOR

CD-FM1

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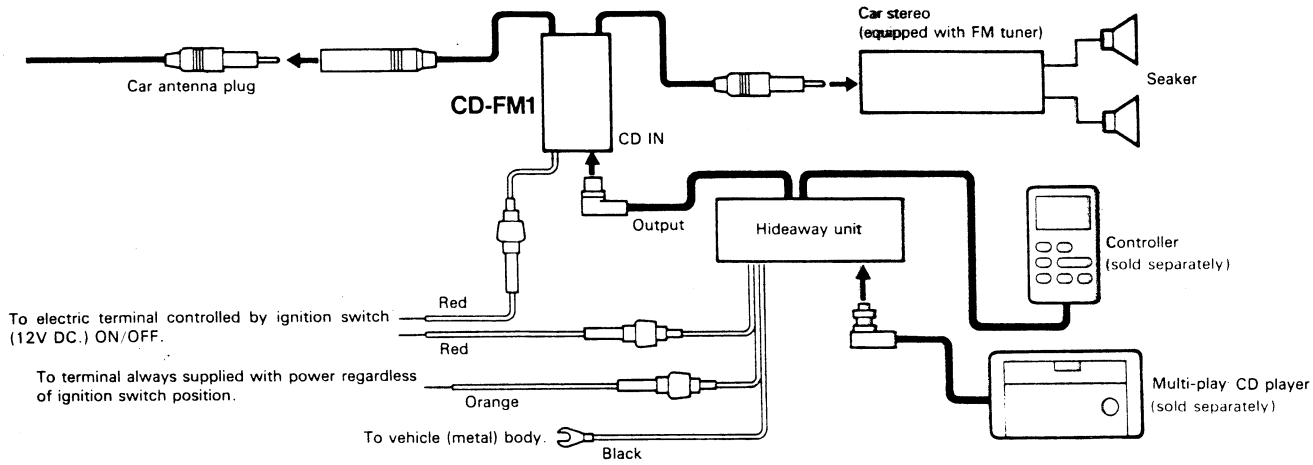
FEATURES

- This adaptor enables you to play external CD player with your FM car radio or car stereo equipped with FM tuner.
- Converts the audio output of CD player to an FM signal (88.1MHz) makes it receivable on FM tuner.

CONNECTION

In order to prevent a short, be sure to disconnect the negative terminal of battery before making connections.



Note : For other connections see the respective owner's manuals of the units involved in system.

PLAYING CD PLAYER

1 Turn on the power of car stereo or car radio and tune in the tuner to a FM frequency of 88.1MHz.
- When used with an electronically tuned radio/tuner, pretune to 88.1MHz for convenience.
- If your car radio or car stereo is not equipped with muting function, set the volume at a low level when tuning in to 88.1MHz.

2 Operate CD player.
- See the owner's manual of CD player or controller for the complete operating information.

3 Adjust the volume of car stereo while playing CD player.
- Be sure to reduce the volume of CD player before turning it off or when changing over to tuner or cassette.

ATTENTION

- When you want to listen to radio while playing CD player, be sure to turn off the player first, otherwise, antenna remains inoperative and radio broadcast cannot be received.
- Note that some car radios, with this adaptor attached, are designed to receive broadcast momentarily before playing CD when the engine is started out.
- With this adaptor attached, the tuner's receiving capability may be slightly lessened.
- Some PIONEER car stereos are equipped with Best Stations Memory function and Seek function. These functions do not operate while CD player is in operation.
- This adaptor is designed exclusively for equipped with 12V battery. Do not use it for vehicles other voltage battery.
- Be sure to install the unit in a place where the driver is not bothered and where there is no danger of passengers being injured in case of sudden stops. Also do not install in areas where the unit is exposed to extreme heat such as near the heater duct.

SPECIFICATIONS

FM Modulating Frequency : 88.1MHz
Dimensions : 83mm(W)×27mm(H)×47mm(D) (excluding projected parts)
Weight : 200g

ENCLOSURES

Warranty certificate : 1
Owner's manual : 1

Note : Specifications and the design are subject to possible modification without notice due to improvements.

1. ADJUSTMENT

1.1 DC OFFSET ADJUSTMENT

- **Connection Diagram**

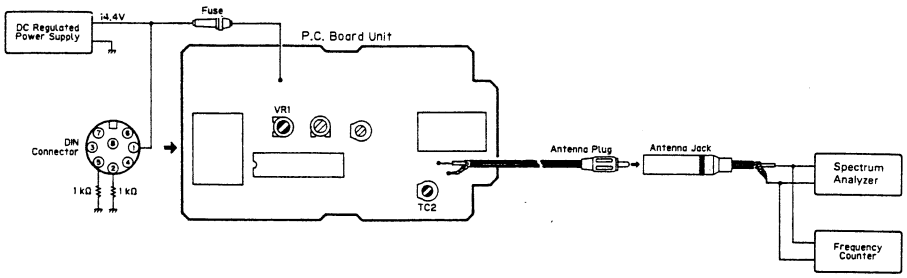


Fig. 1

- **To Adjust**

1. Adjust VR1 so that the leakage of 38 kHz signal becomes minimum.

1.2 FREQUENCY ADJUSTMENT

- **Connection Diagram (shown in Fig. 1)**
- **To Adjust**

1. Adjust TC2 so that the frequency counter reads 88.1 MHz.

1.3 SEPARATION ADJUSTMENT

- **Connection Diagram**

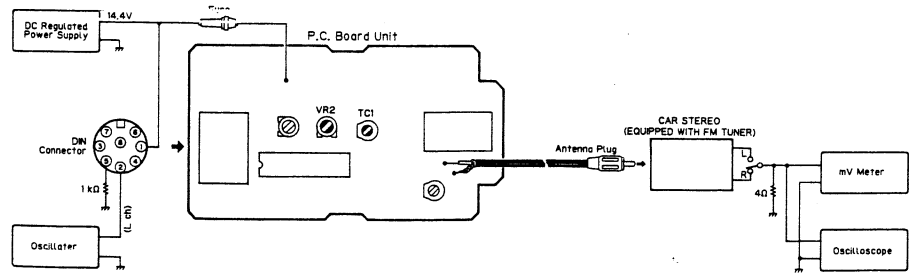


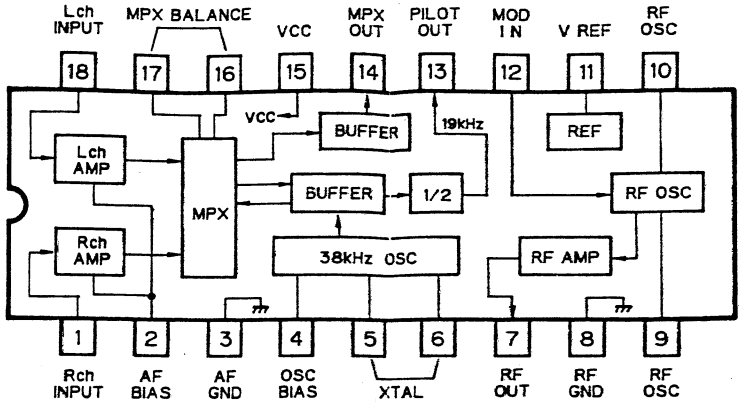
Fig. 2

- **To Adjust**

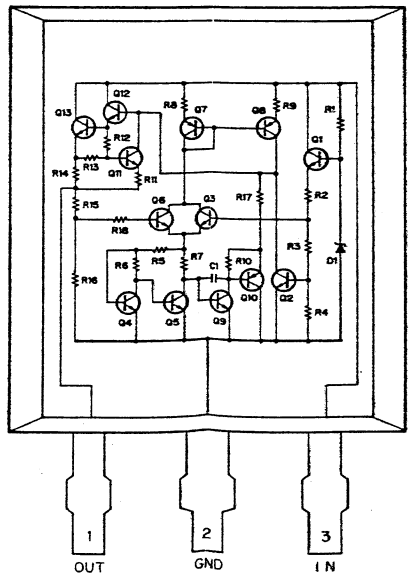
1. Input the 1 kHz, −10 dB (μV) signal into the L-channel.
2. Adjust VR2 and TC1 so that the signal leakage to the R-channel (crosstalk) becomes minimum.

- **IC**

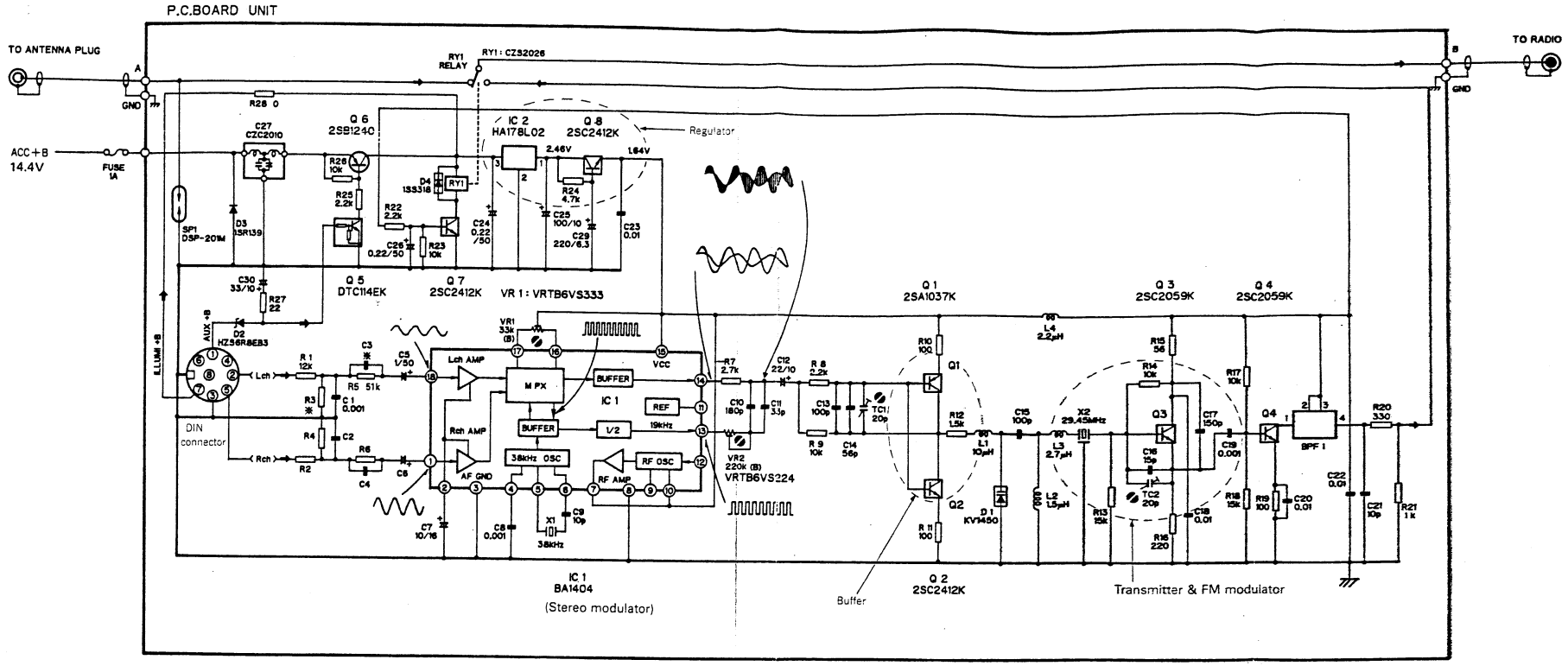
IC1: BA1404



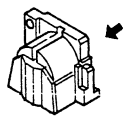
IC2: HA178L02



2. SCHEMATIC CIRCUIT DIAGRAM



● Connection is viewed from the direction of the arrow.



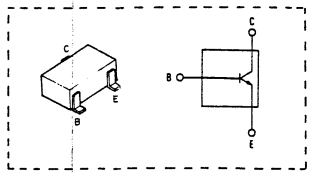
● P.C. Board unit

	CD-FM1/UC	CD-FM1/EW
R3	5.6 k	3.3 k
R4	5.6 k	3.3 k

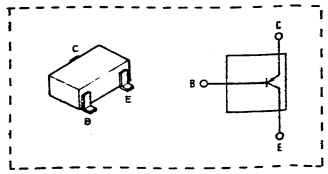
	CD-FM1/UC	CD-FM1/EW
C3	0.0015	0.001
C4	0.0015	0.001

● Transistor

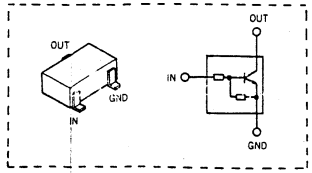
2SC2059K
2SC2412K



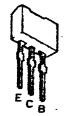
2SA1037K



DTC114EK



2SB1240



NOTE:
- indicates a chip resistor.
- indicates a chip capacitor.
- indicates a chip transistor.
- indicates a chip diode.

Fig. 3

3. CONNECTION DIAGRAM

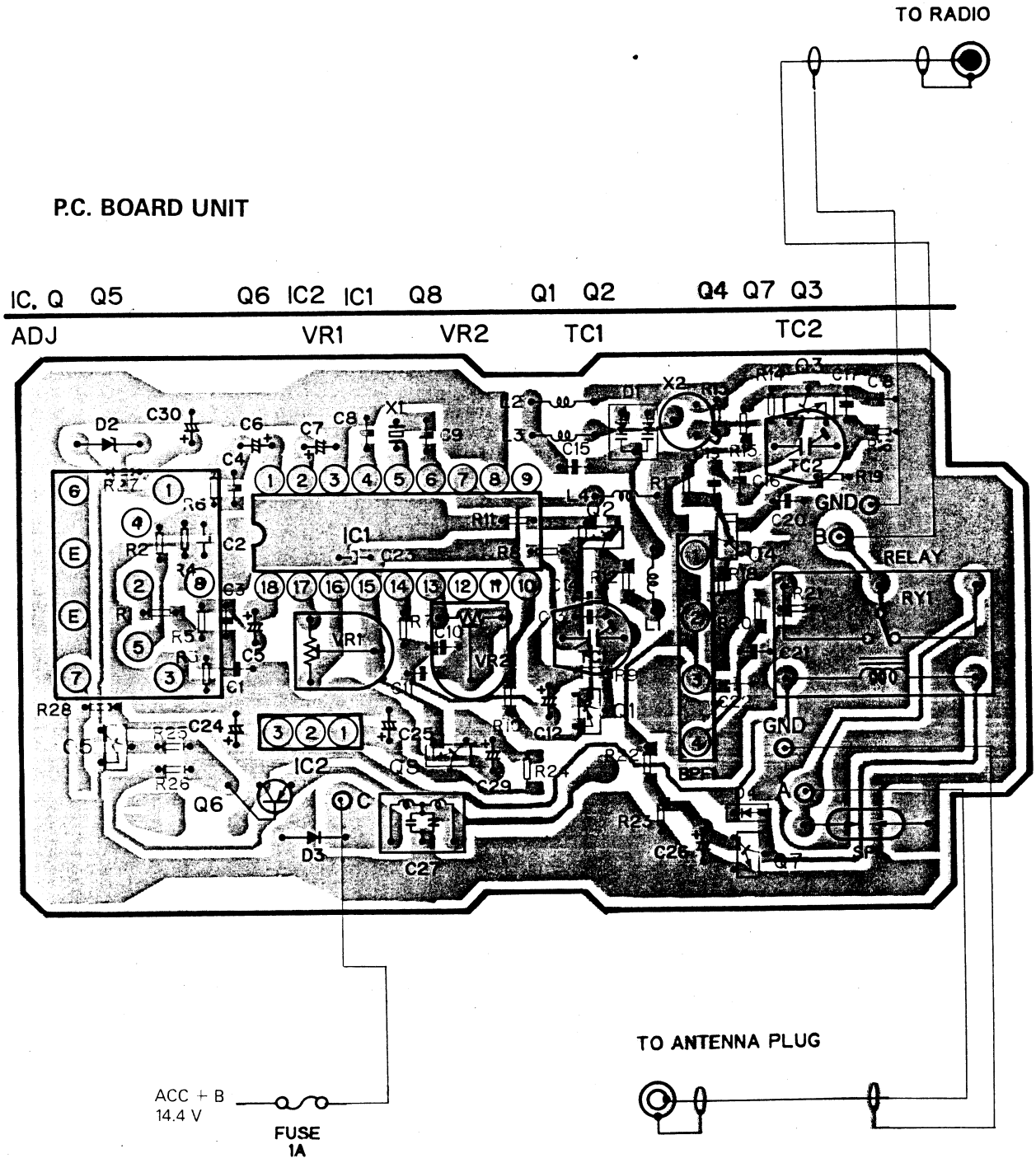


Fig. 4

4. EXPLODED VIEW

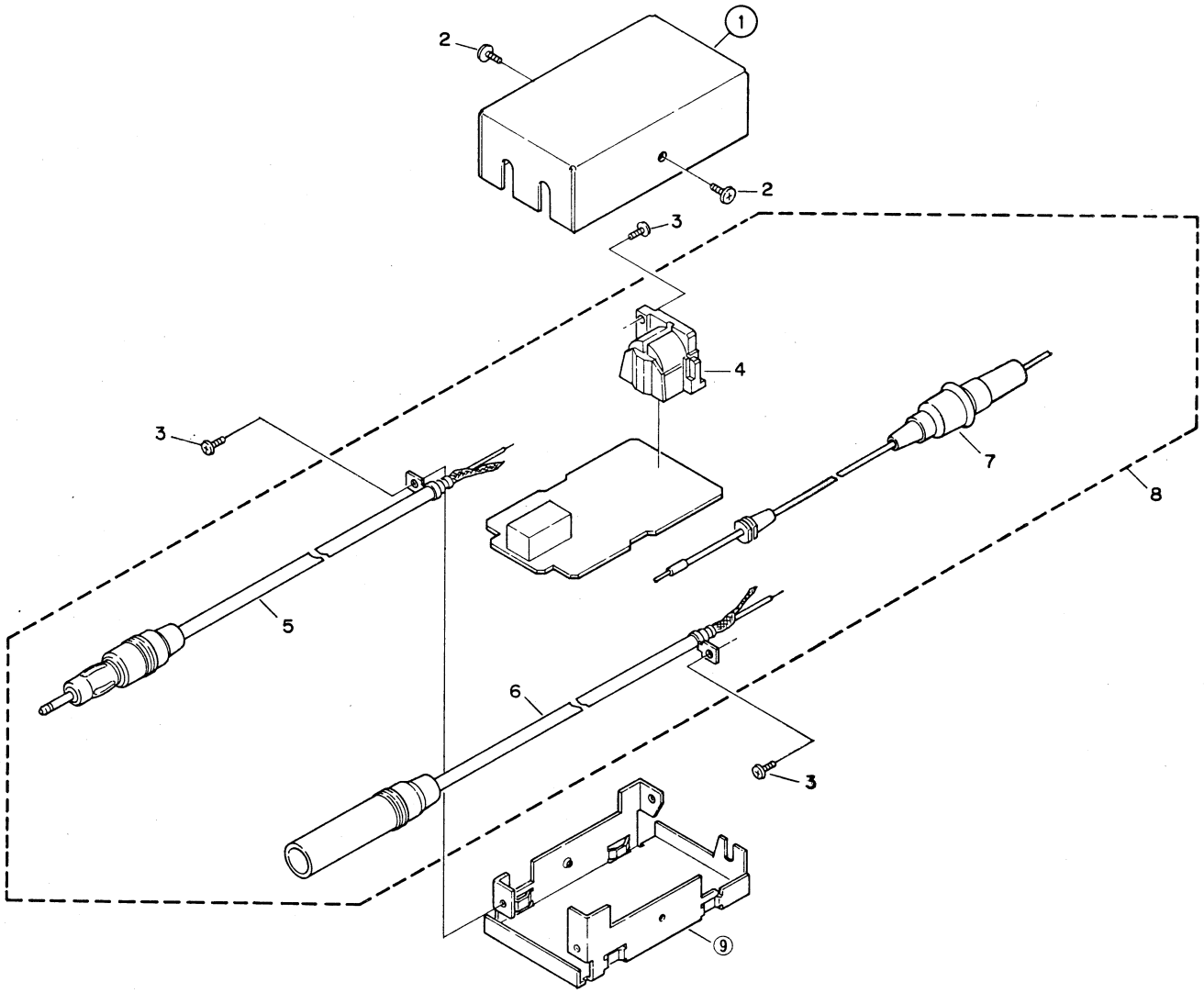


Fig. 5

• Parts List

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Mark	No.	Description	Part No.
	1	Case	
	2	Screw	BMZ30P050FMC
	3	Screw	BMZ26P060FMC
	4	DIN Connector	CKS-549
	5	Antenna Cable	CZD3130
	6	Antenna Cable	CZD3129
	7	Connector	CZD3131
◉	8	P.C. Board Unit (CD-FM1/UC)	CZW3127
		P.C. Board Unit (CD-FM1/EW)	CZW3129
	9	Chassis	

5. ELECTRICAL PARTS LIST

NOTE:

- *For your parts Stock Control, the fast moving items are indicated with the marks ‡‡ and ‡.*
  ‡‡ : GENERALLY MOVES FASTER THAN ‡.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*
  Chip Resistor
  RS1/8S□□□J, RS1/10S□□□J
  Chip Capacitor (except for CQS.....)
  CKS....., CCS....., CSZS.....

Unit Number :
Unit Name : P.C. Board Unit

MISCELLANEOUS

Mark	Circuit Symbol & No	Part Name	Part No
‡‡	IC 1		BA1404
‡‡	IC 2		HA178L02
‡‡	Q 1		2SA1037K
‡‡	Q 2 7 8		2SC2412K
‡‡	Q 3 4		2SC2059K
‡‡	Q 5		DTC114EK
‡‡	Q 6		2SB1240
‡	D 1		KV1450
‡	D 2		HZS6R8EB3
‡	D 3		1SR139
‡	D 4		1SS318
	L 1	Ferri-Inductor 10μH	LAU100K
	L 2	Ferri-Inductor 1.5μH	LAU1R5K
	L 3	Ferri-Inductor 2.7μH	LAU2R7K
	L 4	Ferri-Inductor 2.2μH	LAU2R2K
	BPF 1	Filter	CZT2002
	SP 1		DSP-201M
	TC 1 2	Trimmer 20pF	CCG-070
	RY 1	Relay	CZS2026
	X 1	Osillator 38KHz	CZS2027
	X 2	Osillator 29.45MHz	CZS2028
‡‡	VR 1	Semi-fixed 33kΩ (B)	VRTB6VS333
‡‡	VR 2	Semi-fixed 220kΩ (B)	VRTB6VS224

RESISTORS

Mark	Circuit Symbol & No	Part Name	Part No
	R 1 2		RS1/10S123J
	R 3 4	(CD-FM1/UC)	RS1/10S562J
	R 3 4	(CD-FM1/EW)	RS1/10S332J
	R 5 6		RS1/10S513J
	R 7		RS1/10S272J
	R 8 22 25		RS1/10S222J
	R 9 14 17 23 26		RS1/10S103J
	R 10 11 19		RS1/10S101J
	R 12		RS1/10S152J
	R 13 18		RS1/10S153J
	R 15		RS1/10S560J
	R 16		RS1/10S221J
	R 20		RS1/10S331J
	R 21		RS1/10S102J
	R 24		RS1/10S472J
	R 27		RS1/10S220J
	R 28		RS1/10S0R0J

CAPACITORS

Mark	Circuit Symbol & No	Part Name	Part No
	C 1 2 8 19		CKSQYB102K50
	C 3 4	(CD-FM1/UC)	CKSQYB152K50
	C 3 4	(CD-FM1/EW)	CKSQYB102K50
	C 5 6		CEA010M50LL
	C 7		CEA100M16LL
	C 9 21		CCSQCH100D50
	C 10		CCSQCH181J50
	C 11		CCSQCH330J50
	C 12		CEA220M10LL
	C 13 15		CCSQCH101J50
	C 14		CCSQCH560J50
	C 16		CCSQUJ150J50
	C 17		CCSQCH151J50
	C 18 20 22 23		CKSQYB103K50
	C 24 26		CEAR22M50LL
	C 25		CEA101M10L2
	C 27		CZC2010
	C 29		CEA221M6R3L2
	C 30		CEA330M10LL

6. PACKING METHOD

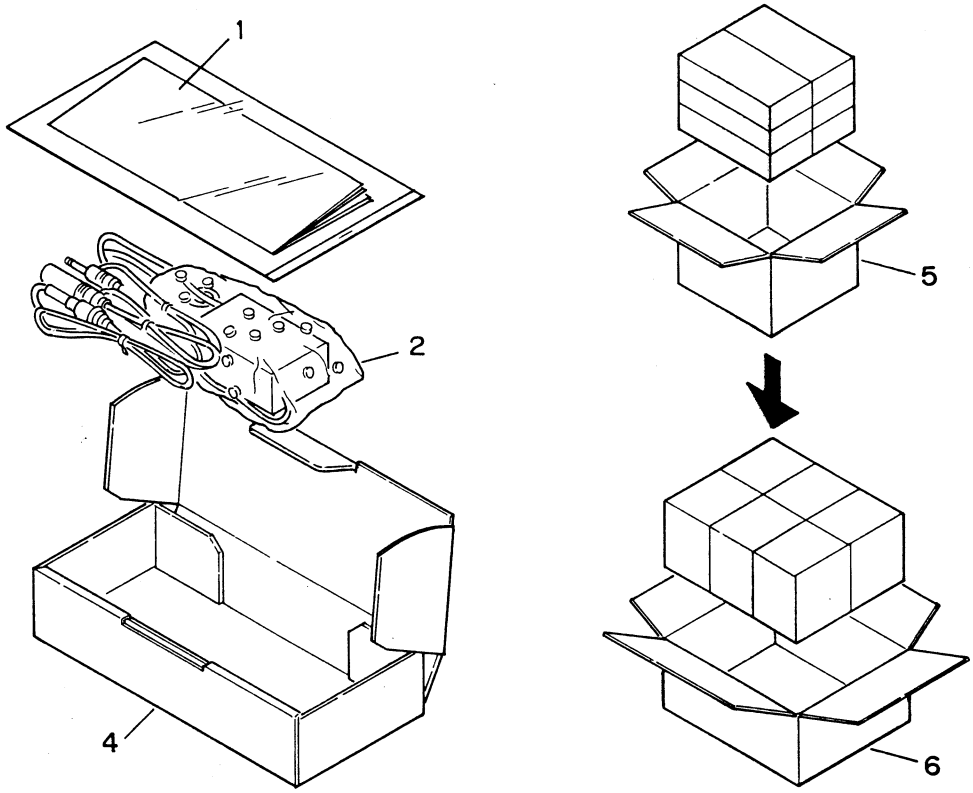


Fig. 6

● Parts List

Mark	No.	Description	Part No.
	1	Owner's Manual (CD-FM1/UC) (English, French)	CZR2076
		Owner's Manual (CD-FM1/EW) (English, French, German, Spanish, Italian)	CZR2078
	2	Cover	CZE2046
	3	.....	.....
	4	Carton (CD-FM1/UC)	CZH3199
		Carton (CD-FM1/EW)	CZH3205
	5	Contain Box (CD-FM1/UC)	CZH3200
	6	Contain Box (CD-FM1/UC)	CZH3201